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PROCEEDINGS

OF THE

SIXTEENTH CONVENTION OF THE SOCIETY OF THE SIGMA XI

PHILADELPHIA, DECEMBER 28, 1914

The Sixteenth Convention of the Society of the Sigma Xi was called to order by President J. McK. Cattell, in the Fencing Room of the Gymnasium, University of Pennsylvania, at 2:05 p. m., December 28, 1914. The President appointed the following a Committee on Credentials: Allan J. Smith, J. F. Kemp, and F. R. Moulton. They reported twenty-two chapters represented by delegates presenting credentials, as follows:

Brown	R. G. D. Richardson
Case	C. S. Howe, T. M. Focke, D. C. Miller
Chicago	F. R. Moulton, A. C. Lunn
Columbia	J. McK. Cattell, J. F. Kemp
Cornell	E. L. Nichols, F. K. Richtmyer
Illinois	W. S. Bayley, H. L. Rietz
Indiana	E. R. Cummings
Iowa	G. W. Stewart, G. F. Kay, A. O. Thomas
Kansas	P. F. Walker
Michigan	K. E. Guthe, F. C. Newcombe, A. F. Shull
Missouri	M. F. Meyer, G. S. Dodds
Northwestern	Henry Crew
Ohio State	J. H. Schaffner, C. S. Prosser, F. L. Landacre
Pennsylvania	O. L. Shinn, D. H. Bergey, F. Ehrenfeld
Purdue	P. N. Evans
Rensselaer	E. D. N. Schulte
Syracuse	C. W. Hargitt
Union	O. H. Landreth, J. H. Stoller, C. E. F. Garis
Washington (D. C.) Alumni	Paul Bartsch, M. W. Lyon, B. H. Ransom
Washington University	J. M. Greenman
Worcester	A. W. Ewell
Yale	J. Barrell, J. C. Tracy

The minutes of the Fifteenth Convention, held in Atlanta last year, were accepted as printed in the SIGMA XI QUARTERLY for March, 1914.

The President appointed a Nominating Committee consisting of the following: E. L. Nichols, S. A. Forbes, C. W. Hargitt, F. C. Newcombe, and M. F. Meyer.

The Treasurer read his annual report; it was voted that the report be received and with bank book and vouchers, be referred to the auditing committee. (This report is given in full on page 18).

The President appointed M. C. Whitaker, Columbia University, auditor for the Treasurer's account. (The report of the auditor is appended to the Treasurer's report.)

The President announced that, following custom, the reports from the several chapters would be called for at the close of the annual dinner in the evening.

The President referred to the work of the two committees on Revision of the Constitution, which had held numerous meetings and had considered carefully two important revisions, already printed and fully explained in the SIGMA XI QUARTERLY for December, 1914; one of these revisions, relating to the method of transacting the business of the Society, was introduced by the Cornell Chapter; the other, introduced by the Case Chapter, refers to two classes of membership. Prof. E. L. Nichols, a member of both committees, was called upon to introduce the various proposed revisions.

It was voted that the Society proceed to the consideration of the amendments to Article VII (Officers) of the Constitution, as given on page 107 of the SIGMA XI QUARTERLY for December, 1914; by request the Secretary read the entire Article as it now stands; a general discussion was held regarding various features of the amendments. By unanimous vote it was resolved that the entire Article VII be amended to read as follows:

ARTICLE VII

OFFICERS OF THE SOCIETY

SECTION 1. The officers of the Society shall be a president, a secretary, a treasurer, and an executive committee of seven, of which the president and secretary shall be *ex officio* members.

SEC. 2. The officers of the Society shall be elected at conventions for a term of two years, excepting that the elective members of the Executive Committee shall be elected for terms of five years, one member to retire each year.

SEC. 3. The duties of the executive officers and of the Executive Committee of the Society shall be those which usually pertain to the several offices. The Secretary shall hold and preserve all the papers of the Society.

By unanimous vote it was resolved that the entire Article VIII (Conventions) be amended to read as follows, paragraphs (d) and

(e) of Section 2 (Delegates), and Section 3 (Credentials), and Section 4 (Order of Business) of the present article being by vote transferred to the By-Laws:

ARTICLE VIII

CONVENTIONS

SECTION 1. A regular convention of the Society, consisting of delegates from each chapter, shall be held annually at such time and place as determined by the Executive Committee of the Society, due notice being given to each chapter.

DELEGATES

SEC. 2. (*a*) Each chapter in good standing shall be entitled to a representation of not more than three delegates at each convention.

(*b*) The delegates representing any chapter shall be chosen from its resident or non-resident members; except that in case any chapter shall be unable to send its own members, it may appoint members of any other chapter as its representatives.

(*c*) In convention the votes shall be by chapters, each chapter having one vote.

QUORUM

SEC. 3. The delegates from the chapters in good standing in the Society, present at a duly called meeting, shall constitute a quorum at a convention.

By unanimous vote it was resolved that Article IX, Section 1 (Expenses), be amended by the substitution of the words "resident membership" for "active membership."

By unanimous vote it was resolved that the entire Article X (Amendments) be amended to read as follows:

ARTICLE X

AMENDMENTS

SECTION 1. This Constitution may be altered or amended at a convention by a two-thirds vote of the chapters represented, provided such amendment has been proposed at the preceding convention.

By unanimous vote it was resolved that Article XI (By-Laws) be added to the Constitution, these to read as follows:

ARTICLE XI

BY-LAWS

SECTION 1. Conventions shall make such by-laws not in conflict with this Constitution, as may be necessary for the proper government of the Society. Such by-laws shall become operative when confirmed by a majority vote of the chapters represented at a convention.

The By-Laws prepared by the Committee on Revision, and published in the SIGMA XI QUARTERLY for December, 1914, pages 108 and 109, were considered; after discussion, revision, and vote upon

each section and sub-section separately, in which the proposed sub-section 4 of Section 1 and the proposed Section III were deleted, it was unanimously voted that the By-Laws as a whole be adopted as follows:

BY-LAWS

I. Conventions of the Society

1. At the conventions of the Society, the order of business shall be the following:—

(*a*) Appointment by the President of three members to serve as a committee on credentials.

(*b*) Report of the committee on credentials.

(*c*) Approval of the proceedings of the last convention as printed.

(*d*) Reports of officers.

(*e*) Reports from chapters.

(*f*) Reports of committees.

(*g*) General business.

(*h*) Election of officers.

(*i*) Adjournment.

2. The regular order of business at a convention may be suspended by the consent of three-fourths of the chapters represented.

3. The appointment of each delegate to a convention shall be certified to by the President or Secretary of the chapter appointing him.

4. The expenses of delegates shall be paid by the chapter sending them.

5. The convention may designate an assistant secretary to keep the minutes of the meeting.

II. Officers of the Society

1. The terms of the officers of the Society shall begin immediately after the close of the convention at which they are elected and continue for two years, or until their successors are elected. In case of vacancies, the Executive Committee shall designate officers to act until the next meeting of a convention.

2. Any vacancy caused by disability of, or resignation of the secretary, corresponding secretary, or treasurer, shall be temporarily filled by an appointment by the president until such office is filled by vote of the convention.

III. Executive Committee

It shall be the duty of the Executive Committee to consider and make recommendations on the granting of charters as provided for in Article II, Section 3, on the basis of the following considerations:

1. In determining the award of a charter to an institution close scrutiny shall be given to the facilities and opportunities of the institution for the advancement and encouragement of original research in pure and applied science, and to the qualifications of its faculty to accomplish these ends.

It was voted that Appendix V to the present Constitution be amended by striking out the words "the Tuesday evening of".

It was moved by Cornell Chapter that Article III, Section 1, be adopted to read as follows: "The Society shall consist of asso-

ciate and active members." There followed an extended discussion of the merits of this amendment and of its effects upon the activities and influence of the chapters. Prof. John C. Tracy explained at length the reason for the opposition of the Yale Chapter to this amendment; representatives from various chapters made remarks, some representing the opinions of their chapters and some expressing personal opinions only; delegates from the following chapters spoke in favor of the motion: Case, Michigan, Missouri, Chicago, Ohio State, Cornell, Indiana, Illinois, Purdue; delegates from the following chapters opposed the motion: Yale, Kansas, Pennsylvania, Columbia, Syracuse. A vote was taken by calling the roll: the result was *yes,* 13 votes; *no,* 8 votes; the amendment was declared defeated, as it failed to receive the required two-thirds vote. The chapters voting *yes* were Cornell, Union, Ohio, Brown, Iowa, Chicago, Michigan, Illinois, Case, Indiana, Missouri, Purdue, and Washington University; the chapters voting *no* were Rensselaer, Kansas, Yale, Pennsylvania, Columbia, Northwestern, Syracuse, and Worcester; no vote was recorded by the Washington Alumni Chapter.

The amendments to Article II (Chapters) of the Constitution as proposed on page 105 of the SIGMA XI QUARTERLY for December, 1914, were severally considered; it was voted unanimously that the proposed Article II, Section 1 be adopted; it was voted unanimously that the proposed Article II, Section 2 be adopted; it was voted that the proposed Article II, Section 3 be amended by inserting the words "to the several chapters and" after "report" and be then adopted; it was voted unanimously that Article II, Section 4 be deleted; it was voted unanimously that the proposed Section 5 be adopted as Article II, Section 4, this new section including the present Section 6; it was unanimously voted that the proposed new Section 5 be deleted; it was unanimously voted that the present Section 7 be deleted; it was unanimously voted that Article II as a whole be adopted to read as follows:

ARTICLE II

SECTION 1. Chapters may be established at any educational institution in which scientific research work is cultivated and promoted.

SEC. 2. Alumni chapters may be established at any place other than an educational institution, wherever the objects of the Society would be furthered.

SEC. 3. A petition for a charter for the establishment of a new chapter shall be communicated to the President of the Society, who shall refer it to

the Executive Committee of the Society for consideration and report to the several chapters and to the (next) convention with its recommendation. A charter shall be granted by a three-fourths' vote of the convention.

SEC. 4. A charter for the establishment of a new chapter shall be issued by the President immediately after the convention, granting it in the following form:

To whom it may concern. Be it known that a Charter for the establishment of a chapter of the Society of the Sigma Xi at ..... is hereby granted to the following persons as Charter Members, conveying to them and their duly elected associates and successors all the privileges conferred by the Constitution of the Society:—

.....

.....

In witness whereof the signatures of the president and secretary and the seal of the Society are hereunto affixed on this the ——— day of ——— in the year of our Lord ———.

It was voted that the Treasurer be authorized to make an assessment of fifty cents per active member to meet the expenses of the current year.

The following amendment to the Constitution was proposed by the Union Chapter and was duly seconded; this amendment applies to the amended Article VII (Officers) as adopted at this meeting:

Resolved that Article VII be amended by the insertion of the following words as Section 2, and that the present Section 2 and Section 3 become Section 3 and Section 4: "Section 2. At the annual convention of the Society preceding the one at which officers are to be elected, a Nominating Committee of five members shall be elected by a preliminary and final ballot of the chapters present. The Nominating Committee shall report to the Executive Committee, not later than ninety days preceding the date of the coming Convention, its proposed list of officers for ensuing year, and the Executive Committee shall send such list of officers to the several chapters not less than sixty days preceding the date of the coming Convention."

The following amendment to the Constitution was proposed by the Kansas Chapter and was duly seconded; this amendment applies to the amended Article X (Amendments) as adopted at this meeting:

Resolved that Article VIII, Section 5 of the Constitution be amended by the addition of the words: "provided said delegates represent not less than one-half of the active chapters".

The following amendment to the Constitution was proposed by the Union Chapter and was duly seconded; this amendment applies to the amended Article X (Amendments) as adopted at this meeting:

Resolved that Article X, Section 1 of the Consitution be amended by the addition of the words: "or shall have been submitted by any chapter to the several chapters through the Executive Committee not less than ninety days prior to the date of the next coming convention."

Upon motion by the Yale Chapter, seconded by the Kansas Chapter, it was voted that the Executive Committee be asked to consider for report to the Convention in December, 1915, plans making for a greater elasticity in membership whereby each chapter may more effectively exert its influence upon the body of undergraduate students.

Upon motion by the Kansas Chapter, it was voted that the Executive Committee be asked to consider for report to the next Convention a change in the number of undergraduates that may be elected to membership.

The meeting adjourned at 5:45 p. m. to attend the annual dinner.

DAYTON C. MILLER, *Recording Secretary.*

The Society gathered for the annual dinner at 6 p. m., in Houston Hall. In spite of the fact that an unexpected number of guests reported without notice at the last minute, arrangements were soon made to care for all and about 160 guests sat down at the tables. The occasion was unique not only in the attractiveness of the room in which the dinner was served, but more even in the use of the special silverware and china, ornamented with the monogram of the society, which was placed at our disposal by the Pennsylvania chapter.

Professor Eric Doolittle, President of the Pennsylvania chapter, expressed to the visitors, in his formal greeting the cordial welcome that was evidenced in many other ways also. President Cattell responded briefly and then read the customary presidential address which is printed elsewhere in this number. A vote of thanks was adopted with enthusiasm for the work of the local committee and the generous hospitality of the chapter and of the University.

After dinner the chapters were called out in order and responded with brief reports. Since formal reports are now printed regularly in the QUARTERLY, and since chapters were often represented by those who were not official delegates, the speakers recounted events in the early history of the chapter or presented interesting bits of local color that evoked much applause and laughter. Only a few chapters were unrepresented and failed to make any report, viz.;

Rensselaer, Missouri, Colorado, Union, Minnesota, Stanford, California, University of Washington, Worcester, and Washington University.

The President announced that by vote duly taken in accordance with the terms of the Constitution, charters had been awarded to the University of Texas and to the Alumni Chapter at Washington, D. C. The delegate of the latter responded with a report on the outlook for the new venture that was enthusiastically approved.

The report of the Nominating Committee was presented, recommending the following named persons for the positions indicated:

President, CHARLES S. HOWE.
Secretary, HENRY B. WARD.
Treasurer, JAMES F. KEMP.

Executive Committee:

J. McKeen Cattell for term ending January, 1916.
Julius Stieglitz for term ending January, 1917.
Dexter S. Kimball for term ending January, 1918.
Edward Orton, Jr. for term ending January, 1919.
Clarence E. McClung for term ending January, 1920.

It was voted unanimously to approve the report and elect the persons named.

The President then declared the Philadelphia Convention closed.

HENRY B. WARD

[The Recording Secretary was listed by the American Association for the Advancement of Science for an important address on the evening of our annual dinner so that he was unable to attend or present a report of that session in his official record of the Convention Proceedings.]

LIST OF GUESTS AT ANNUAL DINNER

Name	*Chapter or Location*
Altenbury, Edgar	
Babb, M. J.,	Pennsylvania
Baldwin, B. T.	
Barrell, Joseph,	Yale
Barton, S. G.,	Pennsylvania
Bartsch, Paul,	Iowa
Bauer, L. A.	
Bayley, W. S.,	Illinois
Beattie, R. Kent,	Washington, D. C.
Bergey, D. H.,	Pennsylvania
Blaker, Ernest,	Cornell
Bradshaw, John W.,	Michigan
Broadhurst, Jean	Columbia
Brown, S. D.	
Buchanan, R. E.,	Chicago
Carothers, Eleanor,	Kansas
Carter, Edna	
Cattell, J. McK.,	Columbia
Cattell, Mrs. J. McK.	
Chandler, W. H.,	Cornell
Cole, A. D.,	Ohio

Colton, H. S., Pennsylvania
Cooley, J. S.
Crook, A. R., Northwestern
Cummings, Edgar R., Indiana
Day, E. C., Syracuse
Doolittle, C. L., Pennsylvania
Doolittle, Eric, Pennsylvania
Downing, E. R.
Duncan, R. W.
Duncan, R. C.
Edson, H. A., Wisconsin
Ehrenfeld, F., Pennsylvania
Emerson, R. A., Nebraska
Evans, P. N., Purdue
Ewell, Arthur, Worcester
Focke, Theo. M., Case
Fox, Henry, Pennsylvania
Fox, Mrs. Henry
Gilbert, E. M., Wisconsin
Glenn, O. E., Pennsylvania
Greenman, J. M., Chicago
Grondahl, L. O., Washington State
Guthe, K. E., Michigan
Hargitt, Charles W., Syracuse
Harman, Mary T., Indiana
Harper, D. R., 3d, Washington, D. C.
Heinicke, Arthur J., Cornell
Hepburn, Joseph S., Pennsylvania
Hering, C., Pennsylvania
Heuser, Chester H., Kansas
Hodge, Percy, Alpha
Hoge, Mildred
Hotchkiss, H. J., Alpha
Howe, C. S., Case
Howard, L. O., Alpha
Hower, H. S., Case
Hower, Mrs. H. S.
Hoyt, J. E., Pennsylvania
Humphreys, W. J.
Humphreys, Mrs. W. J.
Jennings, O. E., Omega
Jennings, Mrs. O. E.
Johnson, A. G., Wisconsin
Kemp, James F., Columbia
Leighty, C. E., Alpha
Long, John H., Northwestern
Love, Harry H., Alpha
Karrar, Enoch, Washington State
Kay, G. F., Iowa
Keller, H. F., Pennsylvania
Keyser, C. J.
Keyser, Mrs. C. J.
Landreth, Olin H., Union
Leland, O. M., Cornell
Lewis, Albert B., Chicago
Lyon, Jr., M. W., Brown
Lyon, M. W., Jr., Brown
Lunn, Arthur C., Chicago
Mabery, C. F., Case
MacFarlane, John M., Pennsylvania
MacNeal, Ward J., Illinois
McClung, C. E., Pennsylvania
McDowell, Louise S., Cornell
McIndoo, N. E., Washington, D. C.
Magruder, Wm. T., Ohio
Mathews, C. W., Kentucky State University
Merritt, E.
Miller, Mrs. D. C., Cleveland, Ohio
Moler, G. S., Cornell
Moore, Emeline, Alpha
Moore, J. P., Pennsylvania
Moulton, F. P., Chicago
Myers, C. H.
Neal, H. V., Illinois
Nichols, Edward L., Cornell
Nichols, Mrs. E. L.
Nolen, G. S.
O'Shaughnessy, L., Pennsylvania
Patterson, Robert A., Yale
Pennell, F. W., Pennsylvania
Pickering, E. C.
Plummer, G. W., Pennsylvania
Prosser, Charles S., Ohio
Randall, H. M., Michigan
Ransom, B. H., Washington, D. C.
Rietz, H. L., Illinois
Richards, A., Texas
Richtmyer, F. K., Cornell
Riesman, David, Pennsylvania
Rivas, D., Pennsylvania
Robbins, Wm. J., Cornell
Richardson, R. G. D., Brown
Roe, E. D., Jr., Syracuse
Safford, F. H., Pennsylvania
Schaffner, John H., Ohio

Schmidt, W. G.
Seal, A. N., Pennsylvania
Sharp, Lester W., Chicago
Shinn, Owen L., Pennsylvania
Shull, A. F., Michigan
Shull, G. H., Chicago
Shull, J. Marion
Smyth, H. F., Pennsylvania
Spence, B. J., Illinois
Springsteen, H. W., Case
Starr, Anna M., Chicago
Steckbeck, D. W., Pennsylvania
Stevens, Neil E., Yale
Stewart, A. H., Pennsylvania
Stewart, George Walter, Iowa
Stokey, Alma G., Chicago
Stone, Witmer
Stradling, G. F., Pennsylvania
Stuhlmann, Otto, Jr.
Sweeney, O. R., Pennsylvania
Tatnall, R. R., Northwestern
Thayer, Horace H., Jr., Cornell
Thomas, A. O., Iowa
Trotter, S., Pennsylvania
Ulrich, E. B.
Veblen, Oswald, Chicago
Vedder, Edmund B., Pennsylvania
Wagner, Samuel T., Pennsylvania
Waggoner, C. W., Alpha
Walker, P. F., Kansas
Ward, Henry B., Illinois
Wenrich, D. H., Kansas
White, Henry S., Northwestern
White, Mrs. Henry S.
Wick, Frances G., Cornell
Wolcott, Robert H., Nebraska
Young, Robert T., Nebraska
Youngker, H. W., Pennsylvania